UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/447,312	11/22/1999	SCOTT D. BLANCHARD	IRI03844	3661

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EXAMINER
VAUGHAN, MICHAEL R

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 02/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.		Applicant(s)	
Office Action Summary	09/447,312		BLANCHARD ET AL.	
	Examiner		Art Unit	
	Michael R Vaughan		2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 November 2003</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-27</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-27</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>24 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

Detailed Action

1. Claims 1-27 are pending. The communication filed on 11-24-03 amended claims 1, 3, 23, and 27. Claims 1-27 remain for examination.

Response to Argument

2. Applicant's arguments with respect to claims 1 and 23 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments filed 11-24-03 with respect to independent claims 7, 11, and 16 have been fully considered but they are not persuasive.

4. As per claim 7, Applicants specifically argue that, "*Weiss fails to disclose or suggest applying at least on ordering mask to the received packet in a known order from a list of ordering masks to find a current ordering mask that was previously used to mask the received packet.*" Examiner however disagrees; Weiss discloses maintaining a sequence number along with a corresponding error correction code at the transmitting end (refer to column 6, lines 5-47). Weiss generates a known list of codes by retaining the error correction codes for later comparison (lines 21-22). Order is preserved by use of the sequence number and the list is known because the error correction codes are

maintained, hence stored.   Moreover, Weiss discloses finding the current ordering

mask by comparing the current code to a list of previously stored codes (column 12, 49-

65). Again, this discloses a buffer containing a list of codes that are used to find the

current mask.

5. As per claim 11, Applicants specifically argue that, "*Weiss fails to disclose or*

suggest setting a temporary ordering mask equal to a next ordering mask in a list of

ordering masks". Examiner however disagrees; Weiss discloses using a temporary

mask to compare to the received mask in order to maintain synchronization between the

sender and receiver (column 12, lines 49-65). More specifically, Weiss discloses

traversing through list of masks until a match is found by comparing a temporary

ordering mask to each mask of a set stored in a buffer. Once a match is found the

acknowledgement is made and appropriate counters are updated (column 8, lines 51-

58).   Therefore, it is evident that temporary masks are set equal to each mask in a list

in order to find to correct mask.

6. As per claim 16, Applicants specifically argue that, "*Takamoto et al fail to*

disclose an error detection device coupled to the unmasking device, the error detection

device being configured to detect errors in unmasked received packets". Examiner

however disagrees and maintains the inherency of this limitation from the teachings of

Takamoto et al. Takamoto et al disclose a system in which packets may be divided up

into parts to increase the throughput of parallel communication paths. Takamoto et al

explicitly discloses that their system is to interconnect with preexisting protocols of communication (column 18, lines 25-30). Examiner does agree that certain types of errors are checked for using the tagged (masked) packets. Takamoto et al disclose that the errors that are checked for are related to the mask parameters such as the destination ID, division flag, packet ID, division count, etc (column 17, lines 45-50). Each packet of data from the sending program is divided into sub-packets, which are tagged separately. Remembering that Takamoto et al system is devised to interconnect with preexisting protocol of communication means that other types of overhead will be a part of the data section. One type of overhead that is very common with unreliable data communication is the use of cyclical redundancy codes, CRCs. These error detection codes are used to detect changes in the data bits being transmitted. This type of error checking is not performed by Takamoto et al system prior to merging the sub-packets back into the large packet. However, CRC checks are notoriously well known in art of data communication. It is for this reason that it is inherent that Takamoto et al system is coupled to an error detection device being configured to detect errors in unmasked received packets. When the sub-packets are merged back together, Takamoto et al disclose sending the packets to the receiving user program. This of course implies sending the data up through the protocol stack, which inherently performs some sort of error detection to make sure all the received bits, were received with the correct value.

New Grounds of Rejection

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

7. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being
indefinite for failing to particularly point out and distinctly claim the subject matter which
applicant regards as the invention. Claims 1 and 3 recite the limitation "the error
detection codes" in the amended text. There is insufficient antecedent basis for this
limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed
publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 16, 17, and 18 are rejected under 35 U.S.C. 102(a) as being unpatentable by Takamoto et al (EP 762705 A2).

As per claim 16, please see prior office action and Response to Argument in this office action.

As per claims 17 and 18, please see prior office action.

9. Claims 11, 12, and 14 are rejected under 35 U.S.C. 102(a) as being unpatentable by Weiss (USP 4,754,482).

As per claim 11, please see prior office action and Response to Argument in this office action.

As per claims 12 and 14, please see prior office action.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1, 2, 3, 4, 5, 6, 19, 20, 21, 22, 23, 24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takamoto et al in view of Weiss (USP 4,754,482).

As per claim 1, Takamoto et al disclose applying error codes to each of the plurality of data packets (column 18, lines 1-6). Takamoto et al are silent in explicitly disclosing masking each of the plurality of data packets to which the error codes have been applied, and that the masking being performed using a plurality of ordering masks in a known order. Weiss teaches sending using acknowledgements consisting of sequence numbers, identifiers, and error correction code to synchronize transmissions between the sender and receiver. The acknowledgements are masked in such a way to inform the receiver as to which packet of data the acknowledgement refers to. Weiss teaches that the error correction codes can be match to a preexisting list of codes to determine the block of data (column 6, lines 40-51). It would be advantageous to mask acknowledgements in such a way that they recipient of the acknowledgements can quickly and efficiently determine which data is being acknowledged. One of ordinary skill in the art would be motivated to use masking on acknowledge of errors so that the correct data can be retransmitted. In view of this, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ the teachings of Weiss within the system of Takamoto et al because it would allow the original transmitted to quickly and efficiently resend packets that were erroneously transmitted.

As per claim 23, Takamoto et al disclose a forward error device coupled to receive the formatted packets from the packet formatter and configured to apply error codes to the formatted packets (column 18, lines 1-5); a mask store (see Fig. 1, element 108). Takamoto et al disclose a masking device coupled to the mask store (Fig. 1, element 111) but does not explicitly disclose whether or not the mask store adds masking information to the formatted packets to which the error codes have been applied. The examiner supplies the same rationale for the motivation to combine the teachings of Weiss within the system of Takamoto et al as recited in the rejected of claim 1.

As per claims 2, 3, 4, 5, 6,19, 20, 21, 22, 24, 26, and 27, please see prior office action.

11. Claims 7, 8, 9, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss in view of Gross et al (USP 5,761,431).

As per claim 7, please see prior office action and Response to Argument in this office action.

As per claims 8, 9, 10, and 13, please see prior office action.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Weiss in view of Larsson et al (WO 9,949,695 A1.)

As per claim 15 please see prior office action.

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Takamoto et al and Weiss in further view of Leopold (USP 5,528,693).

As per claim 25, please see prior office action.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R Vaughan whose telephone number is 703-305-0354. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MV
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Art Unit 2131

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